

# Homework 3

CMIS 141

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Screen capture of my program compiling and running my 3 test cases in an IDE. The pane on the right is the output, center pane is my test class, left pane the project file browser.

The screenshot shows the IntelliJ IDEA IDE with the TestHeadPhone.java file open in the center pane. The left pane shows the project file browser with the following structure:

- cmis141 > week\_6 > src > TestHeadPhone
- cmis141 > week\_6 > src > public > HeadPhone.class
- cmis141 > week\_6 > src > public > TestHeadPhone.class
- cmis141 > week\_6 > src > public > week\_6.iml
- cmis141 > week\_6 > src > public > .gitignore
- cmis141 > week\_6 > src > public > cmis141.iml
- cmis141 > week\_6 > src > public > IntelliJ-Java-google-style.xml
- cmis141 > week\_6 > src > public > LICENSE.md
- cmis141 > week\_6 > src > public > readme.md
- cmis141 > week\_6 > src > public > External Libraries
- cmis141 > week\_6 > src > public > Scratches and Consoles

The center pane shows the TestHeadPhone.java file with the following code:

```
1  /*
2   * File: TestHeadPhone.java
3   * Author: Jimmy Smutek
4   * Date: September 30, 2018
5   * Purpose: This program tests the HeadPhone class.
6   */
7  import java.awt.Color;
8
9  public class TestHeadPhone {
10     public static void main(String[] args) {
11         // Instantiate test objects
12         HeadPhone HeadPhoneOne = new HeadPhone();
13         HeadPhone HeadPhoneTwo = new HeadPhone();
14         HeadPhone HeadPhoneThree = new HeadPhone();
15
16         // Test 1
17         System.out.println("***** TEST 1 *****");
18         // Default object & toString()
19         System.out.println("Default object toString() = ");
20
21         // Test setters
22         System.out.println("**** Setters ****");
23         HeadPhoneOne.setVolume(1);
24         HeadPhoneOne.setHeadPhoneColor(Color.RED);
25         HeadPhoneOne.setHeadPhoneModel("ATH-M50X");
26         HeadPhoneOne.setManufacturer("Audio Technica");
27         HeadPhoneOne.setPluggedIn(true);
28         System.out.println("Setters complete:\n" + HeadPhoneOne.toString());
29
30         // Test getters
31         System.out.println("**** Getters ****");
32         System.out.println("getVolume() = " + HeadPhoneOne.getVolume());
33         System.out.println("getHeadPhoneColor() = " + HeadPhoneOne.getHeadPhoneColor());
34         System.out.println("getHeadPhoneModel() = " + HeadPhoneOne.getHeadPhoneModel());
35         System.out.println("getManufacturer() = " + HeadPhoneOne.getManufacturer());
36         System.out.println("isPluggedIn() = " + HeadPhoneOne.isPluggedIn());
37
38         // Test change volume
39         System.out.println("**** changeVolume() ****");
40         HeadPhoneOne.changeVolume(3);
41     }
42 }
```

The right pane shows the output of the program:

```
***** TEST 1 *****
Default object toString() = HeadPhone{volume=2, pluggedIn=false, manufactur
*** Setters ***
Setters complete:
HeadPhone{volume=1, pluggedIn=true, manufacturer='Audio Technica', headPhon
*** Getters ***
getVolume() = 1
getHeadPhoneColor() = java.awt.Color[r=255,g=0,b=0]
getHeadPhoneModel() = ATH-M50X
getManufacturer() = Audio Technica
isPluggedIn() = true
*** changeVolume() ***
Changed volume:
HeadPhone{volume=3, pluggedIn=true, manufacturer='Audio Technica', headPhon
***** TEST 2 *****
Default object toString() = HeadPhone{volume=2, pluggedIn=false, manufactur
*** Setters ***
Setters complete:
HeadPhone{volume=3, pluggedIn=false, manufacturer='Sennheiser', headPhoneCo
*** Getters ***
getVolume() = 3
getHeadPhoneColor() = java.awt.Color[r=0,g=0,b=0]
getHeadPhoneModel() = HD600 S Apogee
getManufacturer() = Sennheiser
isPluggedIn() = false
*** changeVolume() ***
Changed volume:
HeadPhone{volume=2, pluggedIn=false, manufacturer='Sennheiser', headPhoneCo
***** TEST 3 *****
Default object toString() = HeadPhone{volume=2, pluggedIn=false, manufactur
*** Setters ***
Setters complete:
HeadPhone{volume=2, pluggedIn=true, manufacturer='Audeze', headPhoneColor=j
*** Getters ***
getVolume() = 2
getHeadPhoneColor() = java.awt.Color[r=0,g=0,b=255]
getHeadPhoneModel() = LCD-4
getManufacturer() = Audeze
isPluggedIn() = true
*** changeVolume() ***
Changed volume:
HeadPhone{volume=1, pluggedIn=true, manufacturer='Audeze', headPhoneColor=j
Process finished with exit code 0
```

Test tables showing the input, expected and actual output, and pass/fail status for my 3 test cases.

Input	Expected Output	Actual Output	Pass
volume=1,  pluggedIn=true,	***** TEST 1 *****  Default object toString() =	***** TEST 1 *****  Default object toString() = HeadPhone{volume=2,	Pass

<p>Manufacturer= 'Audio Technica'</p> <p>headPhoneColor= Black</p> <p>headPhoneModel= ATH-M50X</p> <p>changeVolume=3</p>	<pre>HeadPhone{volume= 2, pluggedIn=false, manufacturer="", headPhoneColor=java a.awt.Color[r=0,g=0,b =0], headPhoneModel=""}</pre> <p>*** Setters ***</p> <p>Setters complete:</p> <pre>HeadPhone{volume= 1, pluggedIn=true, manufacturer='Audio Technica', headPhoneColor=java a.awt.Color[r=255,g= 0,b=0], headPhoneModel='A TH-M50X'}</pre> <p>*** Getters ***</p> <pre>getVolume() = 1 getHeadPhoneColor() = java.awt.Color[r=255, g=0,b=0] getHeadPhoneModel( ) = ATH-M50X getManufacturer() = Audio Technica isPluggedIn() = true *** changeVolume() ***</pre> <p>Changed volume:</p> <pre>HeadPhone{volume= 3, pluggedIn=true, manufacturer='Audio Technica', headPhoneColor=java a.awt.Color[r=255,g= 0,b=0], headPhoneModel='A TH-M50X'}</pre>	<pre>pluggedIn=false, manufacturer="", headPhoneColor=java.a wt.Color[r=0,g=0,b=0], headPhoneModel=""}</pre> <p>*** Setters ***</p> <p>Setters complete:</p> <pre>HeadPhone{volume=1, pluggedIn=true, manufacturer='Audio Technica', headPhoneColor=java.a wt.Color[r=255,g=0,b=0], headPhoneModel='ATH- M50X'}</pre> <p>*** Getters ***</p> <pre>getVolume() = 1 getHeadPhoneColor() = java.awt.Color[r=255,g= 0,b=0] getHeadPhoneModel() = ATH-M50X getManufacturer() = Audio Technica isPluggedIn() = true *** changeVolume() ***</pre> <p>Changed volume:</p> <pre>HeadPhone{volume=3, pluggedIn=true, manufacturer='Audio Technica', headPhoneColor=java.a wt.Color[r=255,g=0,b=0], headPhoneModel='ATH- M50X'}</pre>	
<p>volume=3,</p> <p>pluggedIn=false,</p>	<p>***** TEST 2 *****</p> <p>Default object</p>	<p>***** TEST 2 *****</p>	<p>Pass</p>

<p>Manufacturer='Sennheiser'</p> <p>headPhoneColor=black</p> <p>headPhoneModel='HD660 S Apogee'</p> <p>changeVolume=2</p>	<pre>toString() = HeadPhone{volume= 2, pluggedIn=false, manufacturer="", headPhoneColor=java a.awt.Color[r=0,g=0,b =0], headPhoneModel=""} *** Setters *** Setters complete: HeadPhone{volume= 3, pluggedIn=false, manufacturer='Sennh eiser', headPhoneColor=java a.awt.Color[r=0,g=0,b =0], headPhoneModel='H D660 S Apogee'} *** Getters *** getVolume() = 3 getHeadPhoneColor() = java.awt.Color[r=0,g= 0,b=0] getHeadPhoneModel( ) = HD660 S Apogee getManufacturer() = Sennheiser isPluggedIn() = false *** changeVolume() *** Changed volume: HeadPhone{volume= 2, pluggedIn=false, manufacturer='Sennh eiser', headPhoneColor=java a.awt.Color[r=0,g=0,b =0], headPhoneModel='H D660 S Apogee'}</pre>	<pre>Default object toString() = HeadPhone{volume=2, pluggedIn=false, manufacturer="", headPhoneColor=java.a wt.Color[r=0,g=0,b=0], headPhoneModel=""} *** Setters *** Setters complete: HeadPhone{volume=3, pluggedIn=false, manufacturer='Sennheis er', headPhoneColor=java.a wt.Color[r=0,g=0,b=0], headPhoneModel='HD6 60 S Apogee'} *** Getters *** getVolume() = 3 getHeadPhoneColor() = java.awt.Color[r=0,g=0,b =0] getHeadPhoneModel() = HD660 S Apogee getManufacturer() = Sennheiser isPluggedIn() = false *** changeVolume() *** Changed volume: HeadPhone{volume=2, pluggedIn=false, manufacturer='Sennheis er', headPhoneColor=java.a wt.Color[r=0,g=0,b=0], headPhoneModel='HD6 60 S Apogee'}</pre>	
<p>volume=2,</p>	<p>***** TEST 3 *****</p>	<p>***** TEST 3 *****</p>	<p>Pass</p>

<p>pluggedIn=true,</p> <p>Manufacturer='Audeze'</p> <p>headPhoneColor=blue</p> <p>headPhoneModel='LCD-4'</p> <p>changeVolume=1</p>	<p>Default object toString() =</p> <p>HeadPhone{volume=2, pluggedIn=false, manufacturer="", headPhoneColor=java.awt.Color[r=0,g=0,b=0], headPhoneModel=""}</p> <p>*** Setters ***</p> <p>Setters complete:</p> <p>HeadPhone{volume=2, pluggedIn=true, manufacturer='Audeze', headPhoneColor=java.awt.Color[r=0,g=0,b=255], headPhoneModel='LCD-4'}</p> <p>*** Getters ***</p> <p>getVolume() = 2</p> <p>getHeadPhoneColor() = java.awt.Color[r=0,g=0,b=255]</p> <p>getHeadPhoneModel() = LCD-4</p> <p>getManufacturer() = Audeze</p> <p>isPluggedIn() = true</p> <p>*** changeVolume() ***</p> <p>Changed volume:</p> <p>HeadPhone{volume=1, pluggedIn=true, manufacturer='Audeze', headPhoneColor=java.awt.Color[r=0,g=0,b=255], headPhoneModel='LCD-4'}</p>	<p>Default object toString() = HeadPhone{volume=2, pluggedIn=false, manufacturer="", headPhoneColor=java.awt.Color[r=0,g=0,b=0], headPhoneModel=""}</p> <p>*** Setters ***</p> <p>Setters complete:</p> <p>HeadPhone{volume=2, pluggedIn=true, manufacturer='Audeze', headPhoneColor=java.awt.Color[r=0,g=0,b=255], headPhoneModel='LCD-4'}</p> <p>*** Getters ***</p> <p>getVolume() = 2</p> <p>getHeadPhoneColor() = java.awt.Color[r=0,g=0,b=255]</p> <p>getHeadPhoneModel() = LCD-4</p> <p>getManufacturer() = Audeze</p> <p>isPluggedIn() = true</p> <p>*** changeVolume() ***</p> <p>Changed volume:</p> <p>HeadPhone{volume=1, pluggedIn=true, manufacturer='Audeze', headPhoneColor=java.awt.Color[r=0,g=0,b=255], headPhoneModel='LCD-4'}</p>	